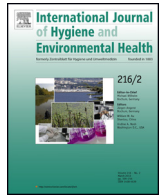




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Review

Medical diagnostics for indoor mold exposure

Julia Hurraß^{a,*}, Birger Heinzow^b, Ute Aurbach^c, Karl-Christian Bergmann^d,
Albrecht Bufe^e, Walter Buzina^f, Oliver A. Cornely^g, Steffen Engelhart^h, Guido Fischerⁱ,
Thomas Gabrio^j, Werner Heinz^k, Caroline E.W. Herr^{l,m}, Jörg Kleine-Tebbeⁿ,
Ludger Klimek^o, Martin Köberle^p, Herbert Lichtnecker^q, Thomas Lob-Corzilius^r,
Rolf Merget^s, Norbert Mülleneisen^t, Dennis Nowak^u, Uta Rabe^v, Monika Raulf^s,
Hans Peter Seidl^w, Jens-Oliver Steiße^x, Regine Szewczyk^y, Peter Thomas^z,
Kerttu Valtanen^y, Gerhard A. Wiesmüller^{a,A}

^a Abteilung Infektions- und Umwelthygiene, Gesundheitsamt der Stadt Köln, Germany

^b Formerly: Landesamt für soziale Dienste (LASD) Schleswig-Holstein, Kiel, Germany

^c Abteilung Mikrobiologie und Mykologie, Labor Dr. Wisplinghoff, Köln, Germany

^d Allergie-Centrum-Charité, Charité Universitätsmedizin Berlin, Germany

^e Experimentelle Pneumologie, Ruhr-Universität Bochum, Germany

^f Institut für Hygiene, Mikrobiologie und Umweltmedizin, Medizinische Universität Graz, Austria

^g Klinik I für Innere Medizin, ZKS Köln und Cologne Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD), Universität zu Köln, Germany

^h Institut für Hygiene und Öffentliche Gesundheit, Universitätsklinikum Bonn, Germany

ⁱ Currently: Landesgesundheitsamt Baden-Württemberg im Regierungspräsidium Stuttgart, Germany

^j Formerly: Landesgesundheitsamt Baden-Württemberg im Regierungspräsidium Stuttgart, Germany

^k Medizinische Klinik und Poliklinik II, Schwerpunkt Infektiologie, Universitätsklinikum Würzburg, Germany

^l Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit, München, Germany

^m Ludwig-Maximilians-Universität München, apl. Prof. "Hygiene und Umweltmedizin", Germany

ⁿ Allergie- und Asthma-Zentrum Westend, Berlin, Germany

^o Zentrums für Rhinologie und Allergologie, Wiesbaden, Germany

^p Klinik und Poliklinik für Dermatologie und Allergologie am Biederstein, Technische Universität München, Germany

^q Institut für Umwelt- und Arbeitsmedizin MIU GmbH, Erkrath, Germany

^r Christliches Kinderhospital Osnabrück, Germany

^s Institut für Prävention und Arbeitsmedizin der Deutschen Gesetzlichen Unfallversicherung, Institut der Ruhr-Universität Bochum (IPA), Germany

^t Asthma und Allergiezentrum Leverkusen, Germany

^u Institut und Poliklinik für Arbeits-, Sozial- und Umweltmedizin, Mitglied Deutsches Zentrum für Lungenforschung, Klinikum der Universität München, Germany

^v Zentrum für Allergologie und Asthma, Johanniter-Krankenhaus im Fläming Treuenbrietzen GmbH, Treuenbrietzen, Germany

^w Formerly: Lehrstuhl für Mikrobiologie sowie Dermatologische Klinik der Technischen Universität München, Germany

^x Zentrum für Kinderheilkunde und Jugendmedizin, Universitätsklinikum Gießen und Marburg GmbH, Gießen, Germany

^y Umweltbundesamt, FG II 1.4 Mikrobiologische Risiken, Berlin, Germany

^z Klinik und Poliklinik für Dermatologie und Allergologie der Ludwig-Maximilians-Universität München, Germany

^A Institut für Arbeitsmedizin und Sozialmedizin, Medizinische Fakultät der RWTH Aachen, Germany

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ABSTRACT

In April 2016, the German Society of Hygiene, Environmental Medicine and Preventative Medicine (Gesellschaft für Hygiene, Umweltmedizin und Präventivmedizin (GHUP)) together with other scientific medical societies, German and Austrian medical societies, physician unions and experts has provided an AWMF (Association of the Scientific Medical Societies) guideline 'Medical diagnostics for indoor mold exposure'. This guideline shall help physicians to advise and treat patients exposed indoors to mold. Indoor mold growth is a potential health risk, even without a quantitative and/or causal association between the occurrence of individual mold species and health effects. Apart from the allergic bronchopulmonary aspergillosis (ABPA) and the mycoses caused by mold, there is only sufficient evidence for the following associations between moisture/mold damages and different health effects: Allergic respiratory diseases, asthma (manifestation, progression, exacerbation), allergic rhinitis, exogenous allergic

* Corresponding author.

E-mail address: julia.hurrass@stadt-koeln.de (J. Hurraß).

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alveolitis and respiratory tract infections/bronchitis. In comparison to other environmental allergens, the sensitizing potential of molds is estimated to be low. Recent studies show a prevalence of sensitization of 3–10% in the total population of Europe. The evidence for associations to mucous membrane irritation and atopic eczema (manifestation, progression, exacerbation) is classified as limited or suspected. Inadequate or insufficient evidence for an association is given for COPD, acute idiopathic pulmonary hemorrhage in children, rheumatism/arthritis, sarcoidosis, and cancer. The risk of infections from indoor molds is low for healthy individuals. Only molds that are capable to form toxins can cause intoxications. The environmental and growth conditions and especially the substrate determine whether toxin formation occurs, but indoor air concentrations are always very low. In the case of indoor moisture/mold damages, everyone can be affected by odor effects and/or impairment of well-being. Predisposing factors for odor effects can be given by genetic and hormonal influences, imprinting, context and adaptation effects. Predisposing factors for impairment of well-being are environmental concerns, anxieties, conditioning and attributions as well as a variety of diseases. Risk groups that must be protected are patients with immunosuppression and with mucoviscidosis (cystic fibrosis) with regard to infections and individuals with mucoviscidosis and asthma with regard to allergies. If an association between mold exposure and health effects is suspected, the medical diagnosis includes medical history, physical examination, conventional allergy diagnosis, and if indicated, provocation tests. For the treatment of mold infections, it is referred to the AWMF guidelines for diagnosis and treatment of invasive *Aspergillus* infections. Regarding mycotoxins, there are currently no validated test methods that could be used in clinical diagnostics. From the perspective of preventive medicine, it is important that mold damages cannot be tolerated in indoor environments.

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